

EPRI Resource Planning

Scenario Analysis in Resource Planning





Automated capacity expansion Production costing LMP forecasting Licensed by 28 utilities/RTOs, 5 states, and several consultants and intervenors









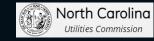
















Correlated Drivers

Commodity Prices
Purchased Power
Natural Gas
Coal
SO2/NOx Allowances

GHG reduction targets
Renewable energy targets
Sustainability practices

"Base" load growth
BTM generation
Data centers
Electrification

New Technologies

Commercial availability

Construction costs

Tax credits



Scenario Matrix Example

	Scenarios									
		Reference	High NG	Low NG	High Demand	Low Demand	Nat'l CO2 Tax	CO2 Limit High NG	CO2 Limit Low NG	Zero Carbon Additions
	Load	⇒	⇒	→	4	21	→	→	→	₩
	Natural Gas Price	→	1	•	→	→	→	小	•	→
м	Coal Price	→	24	7 1	->	→	•	24	7 1	->
а	echnologies									
r	Nuclear Economic Retirements	Staggered beg. 2027					None			
k e	Nuclear Additions	Eligible 2030					Eligible 2028	Eligible 2028;	Eligible 2030; decreased cost	
t	Nuclear License	60 Years					80 Years	60 Y	80 Years	
D	Coal Economic Retirements	Staggered beg. 2026					All eligible beg. 2026 staggered based on age			Unlimited
r	Natural Gas Additions	CA, DE, MD, NM, VA, OR Limited						Limited a	Limited	
i	Natural Gas Retirements	Staggered beg. 2026					Staggered; but all eligible beg. 2026			Unlimited
V	Hydro	Existing								
e r	Geothermal	Existing								
s	Other Renewables	Existing								
	Carbon	50% reduction by 2030, 85% reduction from 2005 by 2050 no carbon price except State/Province					Tax	80% reduction from 2005 no interim target		50% reduction by 2032, 95% by 2050 from 2022
	% of Generation Additions									
	Solar	37.7%	2	77	•	1	₩	<u></u>	1	5 7
В	Wind	33.0%	7 7	•	2	1	77	<u>\</u>	₩	•
u	ਗ	3.7%	2	\Rightarrow	₹ 7	•	77	1	1	₩
i	сс	11.7%	<u>\</u>	1	1	77	\Rightarrow	•	<u></u>	₩
Ι	IC	1.6%	⇒	•	77	•	•	2	S	•
d	Storage	11.7%	7 7	•	77	•	⇒	1	S	•
s	Nuclear	0.6%	⇒	3 1	71	₩	•	1	1	7 1
	Distributed Generation	→	₹ P	•	4	Ψ.	27	₽.	27	4
	Transmission Additions	Known/under construction additions								Economic



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